Discussion

Two hybrid cell clones secreting monoclonal antibodies against the flagellar antigen of *S. typhi* were produced using CBA/N.Nii strain of mice. This strain was chosen because the flagellar antigen preparation was found to have a slight contamination of lipopolysaccharide and in BALB/c mice there would be a predominant response to LPS. CBA/N.Nii mice have X-linked immunodeficiency and do not respond to LPS (10). However, the disadvantage was that splenocytes from these mice when fused with SP2/0 myeloma cells generated relatively less number of hybrids which could be attributed to BALB/c origin of the myeloma partner. Both the monoclonal antibodies reacted specifically with flagellar strain of *S. typhi* and not with *S. dublin*, *S. paratyphi A*, *S. paratyphi B*, *S. typhimurium*, *E. coli*, *P. aeruginosa* and *K. pneumoniae*. However, the antibodies might react to other Salmonellae carrying similar type of flagellar antigen as *S. typhi* (d type). But such serotypes of Salmonella e.g *Salmonella munchen*, *Salmonella manhattan* etc do not cause a disease like typhoid and do not occur commonly in geographical areas where typhoid fever is more prevalent (e.g. India). These antibodies, along with anti-Vi (manuscript submitted) and anti-O (11), will be useful reagents for detection of *S. typhi* in clinical specimens (manuscript submitted). The antigenic determinants recognized by the MoAbs are apparently present on a group of three proteins migrating between 45kd and 60kd. Ibrahim et al (6) have isolated flagellar antigens from ten Salmonella serotypes. Of these nine showed one major band in the molecular weight range of 47,700 and 58,400. Serotype Lille was the only exception showing two bands with molecular weights of 49,700 and 50,700. The multiple band pattern reported in the present study is not due to proteolytic degradation since 2mM phenyl methyl sulfonyl fluoride was used as a protease inhibitor during sonication. It could be due to the presence of different sizes of flagellins in this particular strain. Since flagellar serotype has provided a major basis for distinguishing Salmonella strains, the monoclonal antibodies reported here would be useful for clinical and epidemiological studies.

Acknowledgment

This work was benefited from collateral support of the UNDP Grant No. IND/85/083/A/01/14. We thank Dr. Shashi Relia for doing electron microscopy.